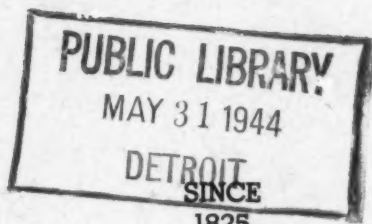


# AMERICAN JOURNAL OF PHARMACY

and

## THE SCIENCES SUPPORTING PUBLIC HEALTH



70TH CONGRESS  
1st Session

### S. 1161

IN THE SENATE OF THE UNITED STATES

JUNE 3 (legislative day, May 24), 1948

Mr. WAGNER (for himself and Mr. McCREAY) introduced the following bill;  
which was read twice and referred to the Committee on Finance

### A BILL

To provide for the general welfare; to alleviate the economic hazards of old age, premature death, disability, sickness, unemployment, and dependency; to amend and extend the provisions of the Social Security Act; to establish a Unified National Social Insurance System; to extend the coverage, and to protect and extend the social-security rights of individuals in the military service; to provide insurance benefits for workers permanently disabled; to establish a Federal system of unemployment compensation, temporary disability, and maternity benefits; to establish a national system of public employment offices; to establish a Federal system of medical and hospitalization benefits; to encourage and aid the advancement of knowledge and skill in the provision of health services and in the prevention of sickness, disability, and premature death; to enable the several States to make more

See page 134 for Review of Current Opinion  
on this Vital Issue

APRIL  
1944

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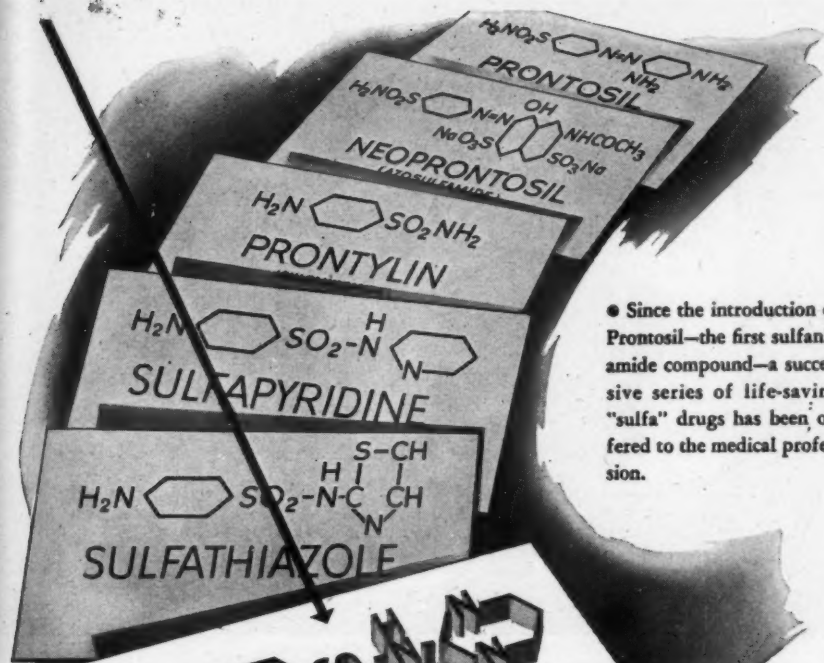
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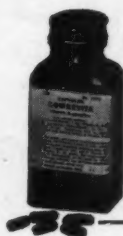
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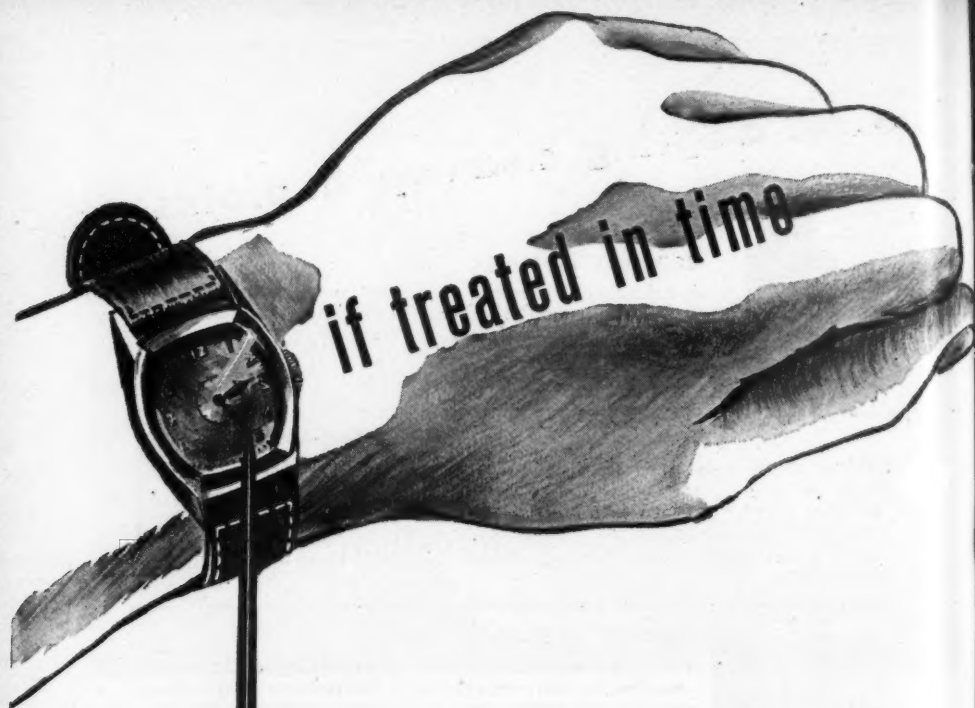
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# AMERICAN JOURNAL OF PHARMACY AND THE SCIENCES SUPPORTING PUBLIC HEALTH

Since 1825

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Vol. 116.

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No. 4

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# E D I T O R I A L

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## THE CIRCUMVENTION OF THE RETAIL PHARMACIST

A RECENT publicity release coming to the Editor's desk heralded a new scheme whereby workers at a large plant may buy vitamin products at cost for use by their families. This came about as the result of the distribution of free vitamins to the employees in an effort to reduce absenteeism due to colds and other respiratory infections. This practice met with such popularity that it was extended in its scope to vitamins at cost for the home.

Giving vitamins without cost to employees is in itself not subject to criticism, but *selling them at cost* for use off the premises by a company not even in the drug field cannot be justified by any argument. The retail pharmacist is acknowledged by all to render an important service in his community, a service that the public has grown to accept and utilize, giving little thought to the underlying factors that make this service available. The drug stores of our country render this important and vital service, which people expect, to a degree and at a cost quite different than that which would prevail if all of the other activities of the drug store were suspended. That is to say if the products available in a drug store were only those which by law are restricted to licensed pharmacies a very drastic reduction in stores would take place and the cost of the remaining service would be greatly increased.

We have from time to time lamented the fact that too many drug stores sell items so far removed from pharmacy that the prestige of pharmacy is harmed. Vitamin products are not in this category since who other than a pharmacist is able to intelligently purvey these to the public? We might also consider the oft-repeated warnings of the medical profession against continued vitamin overdosage. Is there not a possibility of harm in the loose selling of vitamins through non-pharmaceutical channels? But ignoring all these pertinent observations we feel that the selling of vitamins at cost is uneconomic since if this practice were to grow and extend to other lines it would de-



stroy our entire retail distributive system. It does not take an expert in the field of economics to foresee the inherent dangers of such a program.

If all manufacturing companies in the country were to adopt this plan for vitamins, radios, automobiles, etc., our whole distributive system would break down. It has been our retail distributive system, together with our unparalleled production system, which has given Americans their high standard of living. Production without efficient and widespread distribution is effort wasted.

Manufacturers who are so short-sighted as to sell vitamin products for such faulty distribution surely cannot be the same firms who sell through proper pharmaceutical outlets. If by chance some are participating in any such devious policy they deserve the condemnation of all ethical companies and pharmacists at large.

Pharmacists and all others who wish to see our basic economy preserved should speak out against this practice of "vitamins at cost" and any other attempt to circumvent the services of our retailers which are a necessary part of our economic system and one for which no satisfactory substitute has as yet been found.

L. F. TICE.



## **THE PROPOSAL FOR SOCIALIZED MEDICINE IN THE UNITED STATES—THE SCOPE OF THE PROPOSAL AND REACTIONS TO IT**

By John E. Kramer, B. Sc.

The following review by a member of our editorial staff will interest those who wish to read a cross-section of current opinion, both for and against, the proposals set forth in the Wagner-Murray-Dingell Bill. It has been prepared without prejudice and it is not intended to be prejudicial in its effect on the reader.  
—Ed.

**F**OR a number of years before "Pearl Harbor", the trend toward a general program or proposal for socialized medicine in the United States was quite apparent. A number of the leaders of American Medicine and American Pharmacy sensed the imminence of such proposals and voiced their apprehensions to not-too-attentive audiences of fellow practitioners.

For instance, Dr. E. F. Kelly, Secretary of the American Pharmaceutical Association, noted the trend toward the socialization of medicine and public health services in a talk to the Fourth Annual Pharmacy Symposium of the School of Pharmacy of the Medical College of Virginia in 1939. He advocated thorough study of the movement so that there be no misunderstanding of the plans possibly leading to inaccurate conclusions and to serious results. He defined socialism as "any theory or system of social organization which would abolish entirely or in great part the individual effort and competition on which modern society exists." Such a system must be supported by people as groups, rather than as individuals, and he cited public schools and libraries, quite readily acceptable in all communities, as examples of socialization. Such a system already had reached the field of medicine, Dr. Kelly emphasized, in the form of Federal government-supported tuberculosis sanatoria, free medical care for the indigent, and the well-established United States Public Health Service. Beyond that, most States, cities, and even smaller communities, have depart-



ments of health, originally devised to cope with contagious and infectious diseases, but now controlling many other phases of communal health work.

Even before that, in 1932 and again in 1938, Dr. Ivor Griffith, then editor of the *American Journal of Pharmacy*, warned his readers that medicine was facing a change, and that signs pointed to the State control of medical practice.

About one-sixth of the population of this country was forced to rely upon free State or Federal medical aid during the "depression" years. In addition there were, in 1937, 720 voluntary health insurance institutions in this country, having a membership of more than 13,000,000 persons whose incomes were above the permitted maximum of the government sponsored system. Thus it can be seen that socialized medicine in a number of forms had made considerable headway in the United States before the advent of World War II. As a matter of fact, the American Pharmaceutical Association had already passed a resolution of profound interest in all plans proposed for medical aid, and had pledged its cooperation in surveying such plans, strongly urging the retention of free choice of physician, dentist, pharmacist and nurse, by the patient, as an essential feature in whatever system might eventually be adopted.

The attack by the Japanese upon our insular possessions, and the subsequent declaration of war by the United States on Germany and Japan, created a setting in which plans for the socialization of medicine were forced to take a minor position. Doctors, dentists, pharmacists and nurses were rushed into the armed services, as were millions of other civilians. War jobs increased incomes so that "relief" medicine was very largely discontinued because people had enough money to go to their own physicians and pharmacists and dentists, and pay their own way.

However, with the successful carrying out of our war plans, post-war planning became uppermost in the minds of many, and, with it, socialized medicine returned, this time in concrete form. On June 3, 1943, a 90-page bill designated as S. 1161, was presented to the United States Senate by Messrs. Wagner and Murray. On the same day an identical measure, designated as H. R. 2861, was presented to the House of Representatives by Mr. Dingell. A resumé of these measures, now known generally as the Wagner-Murray-Dingell program, is contained in the Journal of the American Surgical Trade Association for October, 1943. We quote herewith:

"It proposes to amend and extend the Social Security Act by establishing a Unified National Social Insurance System. Besides providing unemployment, disability, maternity, old-age, death and survivors' benefits, it would also set up a federal medical and hospitalization insurance system.

This insurance would be compulsory for the millions of persons presently covered by the Social Security Act. It would also be compulsory for about fifteen million additional persons who up to now have been excluded (e. g., domestic servants, farmers, small business men, professional men, and other self-employed individuals). Every insured person, as well as his dependent wife and children, would be eligible for medical and hospital service benefits.

The Unified National Social Insurance System would be financed by taxing employers (6 per cent on wages and salaries paid), employees (6 per cent of wages and salaries received), and the self-employees (7 per cent of the market value of services rendered), up to \$3,000 per worker in any calendar year.

The taxes . . . would include (not be an addition to) present social security payments. They would cover all the benefits now in effect and contemplated by the Wagner bill (not simply medical and hospital service).

Established within the Federal Social Insurance Trust Fund would be a separate Medical Care and Hospitalization Account. Credited to this account would be one-fourth of the money paid in to the main fund in the form of employer and employee contributions, and three-sevenths of the money contributed by the self-employed.

Payments to physicians participating in the sickness insurance program would be governed entirely by the Surgeon General of the Public Health Service. The Wagner bill provides that general practitioners and specialists would be compensated (a) on a fee-for-service basis, according to a fee schedule approved by the Surgeon General; or (b) on a per capita basis, according to the number of people on the doctor's panel; or (c) on a salary basis, whole or part time. Payments could be nationally uniform or could be adapted to take account of 'relevant factors.'

These provisions would give the Surgeon General blanket authority to say how much or how little most physicians could earn. . . .

Any physician 'legally qualified by a state' would be eligible to participate in the sickness insurance program. Participation would not be compulsory by statute but would, for most practitioners, be compulsory in effect if they expected to continue to eat.

Every individual entitled to medical benefits would be permitted to select a general practitioner from the list of participating doctors. The individual's choice would be subject to the consent of the practitioner selected. The individual could subsequently change his selection under regulations prescribed.

Services of specialists would ordinarily be available only upon the advice of general practitioners. Services 'deemed to be specialist services' would be indicated by the Surgeon General; and the only specialists eligible to participate as such would also be designated by him.

Mr. Wagner's sickness insurance system would give patients the following:

1. General medical services—furnished by a physician at the office, home, hospital, or elsewhere, and including preventive, diagnostic, and therapeutic treatment and care, and periodic physical examinations.

2. Special medical services—also furnished at the home, office, hospital, or elsewhere, 'by a physician who is a specialist with respect to the class of service furnished.'

3. Laboratory services—including chemical, bacteriological, pathological, diagnostic and therapeutic X-ray and related services; physiotherapy; special appliances and eye glasses.

4. Hospital services—costing between \$3 and \$6 for each day up to thirty days; between \$1.50 and \$4 for each day in excess of thirty days; and between \$1.50 and \$3 for each day in an institution for the chronic sick.

To prevent abuses by those entitled to benefits, the Surgeon General could decide that every individual would be required to pay a first-service fee in any 'spell of sickness' or course of treatment. This fee could be limited to home calls or to office calls, or could apply to both. (The same provision is already incorporated in many voluntary health insurance plans.) The Surgeon General could also limit the cost of laboratory benefits borne by the proposed system.

The Surgeon General would be authorized to arrange for the availability of the benefits described. He would negotiate agreements with public and private agencies, and with 'private persons or groups of persons' to utilize their services and to pay 'fair' compensation for them. He would purchase all necessary supplies and commodities.

To aid in the administration of the system, a National Advisory Medical and Hospital Council would be established. This council would consist of the Surgeon General as chairman and sixteen members appointed by him. Appointments would be made from a panel of names submitted by medical, hospital, and educational organizations, and by medically informed individuals. Each appointee would hold office for four years and would be paid \$25 a day for time devoted to council business.

This council would ostensibly advise the Surgeon General on standards of quality of medical benefits; designation of specialists; coordination of the services of general practitioners, specialists, hospitals, laboratories, and educational and research institutions; standards for participating hospitals; methods of paying for medical and hospital services; surveys of services furnished by practitioners and hospitals; grants-in-aid for professional education and research; and the establishment of advisory regional committees. Note, however, that the council would be wholly advisory. . . .

According to the proposed law, the methods of administration, including the methods of paying practitioners 'shall ensure the prompt and efficient care of individuals . . . promote personal relationships between physician and patient . . . provide professional and financial incentives for practi-

tioners . . . encourage high standards through the adequacy of payments to practitioners . . . and assist doctors in their opportunities for postgraduate study' . . .

The Surgeon General could limit the number of beneficiaries any physician might serve. Where payment to general practitioners was on a per capita basis, the Surgeon General would pro rate among the practitioners in the area those individuals who, after due notice, had failed to select a doctor or who had been refused by the practitioner chosen. The Surgeon General would also be authorized to establish hearing and appeal bodies to review complaints from doctors and patients."

What was the reaction to the Wagner-Murray-Dingell proposal? Naturally, it had its ardent supporters, and, also, its bitter opponents. Foremost among the latter is Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*, who seems to voice the opinion of that organization. Speaking before the National Conference on Post-War Planning, he stated that the bill confronts medicine, pharmacy and the allied sciences with their greatest crisis, and he decried the fact that only one-fourth of the nation's people are acquainted with the bill. Concluding an article in the October, 1943, issue of *American Druggist*, he says:

"A study of the trend in this field indicates that once complete state medical service were established the state would 'take over' the operation of pharmacies, including the purchase, dispensing and distribution of drugs and medical supplies. For the pharmacist there would remain only a salaried position in a state system with his opportunities definitely controlled by political factors."

Actual opposition to socialized medicine by the A. M. A. and Dr. Fishbein was characterized by their recent refusal to cooperate with Henry J. Kaiser, the well-known ship builder, when he attempted to put a plan in operation among his employees.

The opinion of medical men as a whole seems to be summed up in an article in the official *Bulletin of the Medical Society of Westchester County*, New York State:

"If this is a democracy, it stands to reason that the American people can have what they want—and are willing to pay for in dollars, deprivation or dependency.

Military Victory, the Four Freedoms, Social Security (whatever that is) can be had—at a price.

Sometimes the price is written in blood, tears and sweat, sometimes in the exchange of thoughts and things, sometimes in misery of body and soul.

Nobody escapes the payment. Sometimes the price is reasonable, sometimes exorbitant, rarely cheap.

\$3,048,000,000.00 of Political Medicine yearly in the United States! That is the dollar cost to the public. That is the cost merely in dollars of your money; the cost of which must be paid through taxes by laborers, engineers, business men and women, physicians, surgeons, laboratory technicians, real estate men and women, employed children, everybody.

It is not the whole cost, nor the whole story. It is only the money cost, the introduction to the story.

It is estimated that, at the present time, there are in the United States, available for civilian practice, 120,000 effective physicians. With three billion dollars the Surgeon General could—

a. Allocate 20% for administration costs .....	\$ 600,000,000.00
b. Hire every effective physician in the United States at an average salary of \$5,000 a year .....	600,000,000.00
c. Pay for every available bed in every non-government owned hospital (368,046) 365 days each year (134,336,790 hospital bed-days) at \$5.00 per day..	671,683,950.00
d. Pay \$2.50 per day for each and every government- owned hospital bed (1,051,781) 365 days in the year (383,900,065 hospital bed-days) .....	959,750,162.50
e. Spend for drugs and medicines .....	168,565,887.50
	<hr/>
	\$3,000,000,000.00

It is obvious that, if these proposals become the law of the land, they will destroy the entire system of medical care as we have known it in the United States. . . .

Physicians have built the structure of medicine as it is in the United States today—with the help of business men and free enterprise.

Now Mr. Wagner, Mr. Dingell and Mr. Murray propose in S. 1161, to put the Government in control of medical practice, both public and private; to alter fundamentally the entire structure of American medical practice. . . .

If the American people want this, they can have it—at a price. . . . Most physicians are convinced that it would do more harm than good. Personally American physicians would rather work for the American people than for the American government. They always have worked for the people as individuals, for the most part, and not for the Government,—war-time excepted, of course. They have done so because they have believed and believe now that in that way the people get better, more responsible and more immediate medical service, at reasonable cost—since there are no administrative costs to pay to bureaucratic government job holders. . . .”

In an address delivered at the 122nd Commencement of the Philadelphia College of Pharmacy and Science, Dr. Theodore G. Klumpp, president of the Winthrop Chemical Company, pointed out



dangers in extending federal control over science and said the Wagner-Murray-Dingell proposal "would place in the hands of a single political appointee much power and authority."

He predicted that because pharmacy and medicine are so closely related, enactment of the bill would result in regimentation of both sciences. He said that more than 100 plans for extending medical care are now being tried and that out of these would evolve one or several plans worthy of broader application.

It appears strange, however, as pointed out by Editor Robert L. Swain, in *Drug Topics* for November 15, 1943, that if this proposed legislation seems to be so formidable to the medical profession, and if the spokesmen are so vociferous about it, they continue to attempt to fight their own battles, and ignore pharmacy and the other professions upon which medicine is so dependent. At two conventions called by the National Conference on Planning for War and Post-War Medical Services, pharmacy was not even mentioned in any of the discussions, and had absolutely no voice in the proceedings.

In pharmaceutical circles, it seemed probable at the October, 1943, meeting of the Maryland Pharmaceutical Association that that group would actively oppose the pending legislation.

The stand of the American Pharmaceutical Association has already been stated.

The October, 1943, issue of the *Southeastern Drug Journal* contains a rather extensive and forthright editorial, part of which is quoted here:

"If ever a good dose of American courage and statesmanship were needed in this land of ours, that time is with us, and unless a real demonstration of cooperation and plain speaking is forthcoming in the weeks ahead, the controversial Federal Social Insurance bill to establish 'socialized medicine' will become a reality. Certainly, if medical practice is dominated and exploited by politics and bureaucracy, then Pharmacy too will be similarly controlled. . . . This proposal will add \$12,000,000,000 a year to our annual tax burden. . . .

In a radio address over Station WSB on the evening of Wednesday, September 22, Dean Raimundo De Ovies, of St. Phillips Cathedral of Atlanta, Georgia, prominent throughout church and journalistic circles, said of the bill:

"The trouble with Bill No. 1161 is that it puts politics into the profession and art of medicine, a calling which should be as free from political meddling as the church. Whoever believes in the separation of church and state should as jealously guard the freedom of medicine. Like all other

ministers of religion I want to see every individual made spiritually whole; but I do not believe in any effort to achieve that objective by public taxation—not in a million years! Nor do I desire to see the people taxed to “regiment” their physical health. Some health services can be performed only by Government, admittedly; such as sanitation, quarantine, hospitalization of the indigent, etc. But I do not want Government to tell me what physician I “may” have, to what particular hospital I “must” go, or to contribute to the \$48,000,000-a-year fund that would put the issues of life and death at the mercy of a political appointee, if that appointee were a member of the medical profession.’

Frankly, we are fed up on the idea of adopting every social plan or idea simply because it has been tried in England, Canada, or some other country. Surely, American progress, ingenuity, and liberality have and will solve any social problem confronting our people. Further, unless we call a halt on the mounting proposals for additional deductions from payrolls, to satisfy the social reformers and political parasites, there will be little left for any of us to provide ourselves and families with the bare necessities of life.”

Editor Linwood F. Tice asks in the June, 1943, issue of the *American Journal of Pharmacy*, “Why Not Follow Canada’s Lead?” Herewith follows his query in full:

“It is an interesting comparison to note the different approach employed by Canadians toward a Health Insurance Plan and that method adopted both in England and the United States.

There is every reason to believe that some form of health insurance will be demanded by large numbers of persons in our post-war program, or even before. The difficulty lies in the rather unfortunate juggling which is evident, to see whether the government, the medical professions or a coalition of both shall devise the details and scope of such an endeavor.

Organized medicine in Great Britain recently rejected unanimously the proposals outlined by the Ministry of Health under the now famous ‘Beveridge Plan,’ claiming that they refused to accept a situation in which, according to the ‘British Medical Journal,’ ‘medical men would cease to exist as freely practising doctors and would become instead the whole-time employees of local authorities. . . . If this happens, then doctors will no longer constitute an independent, learned and liberal profession but will instead form a service of technicians controlled by central bureaucrats and by local men and women entirely ignorant of medical matters.’

In our own country legislation has been introduced . . . under the caption of a Unified National Social Insurance System. . . . When one reads the provisions of this legislation it is evident that neither organized medicine nor pharmacy was consulted in developing its details. In fact it is unlikely that it even was graced by having been read by a physician before being submitted, as it does not, in places, employ accepted medical terminology.

Now it is clear that Congressmen, social-minded as they may be, cannot practice medicine even though it lies within their power to enact legislation legalizing them to do so. It is also clear that, without the cooperation of the medical profession, no satisfactory health insurance plan can ever be implemented even though it might be technically sound. If the average American citizen were forced to decide upon the advice of either Congress or his physician on matters pertaining to health we can well imagine his choice.

Our government must recognize that professional groups do have certain unique responsibilities and privileges, and rightfully so, and that they at least deserve the same thoughtful consideration given to a labor union. Professional men are, as a rule, highly trained and well educated persons who have been taught to think for themselves and carefully evaluate any plan or procedure placed before them rather than to follow blindly where they are led, be the path rocky or smooth.

Canada has avoided the obvious error made in our own country and elsewhere by having all the health professions cooperate with the government in devising proposals acceptable to all concerned, and thus progress and human benefit may be expected to follow.

If efforts so far expended in Washington continue along the present trend some government agency must be set up to train a whole new army of physicians, dentists, pharmacists, et al., who are taught blind adherence to bureaucratic dogma and who know not what freedom of action means. Then and only then may the views of our present practitioners be ignored and health or the absence of it become subject to complete political control.

It does not take a very keen analyst to see that medical technology has made tremendous strides in recent years in the saving of human lives and increasing both health and happiness, whereas political demagoguery has set every man against his neighbor until one must be a wizard to tell friend from foe.

Which group the more deserves our trust?"

Editor Tice's reference to the Canadian system which is still to be put into effect, prompts us to quote from an article entitled "Health Insurance and the Druggist," which appeared in the October 1, 1943, issue of the Canadian periodical *Drug Merchandising*:

"Canada's advisory committee on Health Insurance apparently does not believe in halfway measures. It advocates a contributory and compulsory plan, under which every Canadian citizen when sick will be given, free of charge, every kind of medical, hospital, nursing and prescribing service deemed necessary for complete recovery by the physician of his or her choice. It would seem that the committee would like to adopt the most advanced features from every type of state health insurance and combine them all into one good scheme.

However, what will be the position of the retail druggist under such a scheme? In a model bill prepared by the Dominion for the guidance of



provincial legislatures, appeared clause 30, section (1), subsection (F), reading 'that orders for drugs, medicine, materials and appliances supplied shall be priced by a central board, bureau or committee for the whole province in accordance with a tariff agreed upon between the commission and association representatives of pharmacists, and in accordance with regulations made in that behalf.' Any pricing by a central board for the above would present certain delicate problems. . . . According to announced intentions of the government all other interests rendering sickness service—doctors, surgeons, dentists, nurses, hospitals, laboratories, etc.—shall be suitably rewarded for the contribution they make. Why pharmacists rendering a special service may possibly receive a lowered scale of compensation is something that is not clear at this moment.

The clauses in the model provincial bill, mentioned elsewhere, dealing with pharmaceutical benefits leave the retail druggist in no doubt that an effort may be made to scale down the prices he will be allowed to charge for insurance prescriptions. . . . It is estimated that 75% of the total volume of prescription business will be accounted for by insurance prescriptions, if health insurance should come into being. It would seem natural for every druggist to be on the approved list even though he may have to be content with a profit margin considerably below his normal. Each druggist will hope that this business may help in building up his sales volume in other lines. . . . Provincial governments, anxious to qualify for federal subsidies in support of health insurance, may be inclined to accept the recommendations offered for bringing the retail drug trade under firm control. But meanwhile the druggists themselves must put a determined fight to protect their freedom of enterprise against such unwarranted and undemocratic interference. . . ."

News of socialized medicine plans now in effect in Mexico and Australia may be gleaned from the following editorial, which appeared in the October 15, 1943, issue of the *Canadian Pharmaceutical Journal*:

"Mexico, our Latin neighbor to the south of us, has never had the reputation of being very progressive. Once the traveller leaves the beaten highway to beautiful Mexico City, time seems to stop and the traveller sees the farmers living in much the same way as their forebears. But, 'unprogressive Mexico' has solved the problem of adequate medical attention for the majority of its citizens (who reside outside urban areas) with one simple piece of legislation. . . .

The government put through an act requiring that all graduates from medical schools in the country must serve two years in the rural areas. During these two years they were partially subsidized by the state. As a result of this arrangement there has never been a shortage of physicians in the country districts and in many cases the young doctors find the surroundings so congenial that they decide to stay on. The government's requirement has in effect produced more general practitioners because, the

young men know that they will have all types of cases during their two years 'internship.'

The Australian Parliamentary Joint Committee on Social Security has recommended the setting up of a voluntary full-time salaried medical service for the remote parts of that country . . . (It) has set out a full plan of social security . . . (and) the committee feels that the existing deficiencies in medical service can only be remedied by a complete reorganization. Neither the 'panel' system nor the 'fee for service' plan would, in the opinion of the committee, provide a permanent solution."

From the August 30, 1943, issue of the *Australasian Journal of Pharmacy* it is possible to learn more about the Australian system, and, also, about the plan in effect in nearby New Zealand:

"The mandate given by the people of Australia to the Labour Government in the recent election may be regarded as an indication that plans will be proceeded with immediately for the introduction of the Government's post-war reconstruction legislation, including a General Medical Service, either in part now or in full after the termination of the war.

For a quarter of a century the possible effects of Nationalisation on the practice of pharmacy have been discussed by pharmaceutical organisations, and from time to time plans have been drawn up to meet the requirements of various proposals which have been put forward. All previous plans must be discarded as inadequate in view of the knowledge that changes more far-reaching than any hitherto discussed are contemplated by the Government.

Official statements which have been made are not helpful in forming opinion as to whether the introduction of a Pharmaceutical Benefits Plan before the termination of the war is intended. Experience in countries which have adopted National Health Insurance indicates that provision of free medical services inevitably results in a great increase in the demand for the services of doctors and for medicines. It can be assumed that the effects in this country would be more marked, because the plans envisaged are to cover every person in Australia. Any attempt, therefore, to provide a full-scale Medical Service would impose great strain on medical personnel, and would carry with it a possibility of failure. It has been hinted that the Government intended to introduce a scheme of pharmaceutical benefits in advance of a general medical service. This would confer little benefit on that section of the people in most need of relief, because they would still require to obtain a prescription and pay a doctor's fee before obtaining the medicine.

The only justification for providing a free medical service is that the majority of the people, and particularly the poorer section of the people, shall be in a position to obtain a service equal to, if not better than, that which they enjoy under the present system of private practice. It is doubtful whether a better service can be provided under war conditions, when medical practitioners and pharmacists are working at full capacity and supplies of drugs are inadequate. . . .

Medical Services under the New Zealand Social Security Legislation have been held up in some quarters as ideal. There are, however, some indications that even under this system there is some dissatisfaction at results achieved and difficulties arising under the operation of the scheme. Commenting on this, the New Zealand 'Herald' refers to the strain imposed upon the general medical practitioner in coping with the volume of work he has been called upon to perform. The article states that the nature of the Social Security legislation is obviously to blame. 'The inadequacy of the scheme,' it continued, 'was long ago emphasised by competent authority, but haste had its way. Little more, after all, was arranged than the provision of a public purse for the payment of medical fees, the fixation of those fees, and the provision of almost unlimited quantities of free medicine. Almost as much was done in the first code of human law. . . . A modern scheme should surely have aimed at prevention as well as at cure; it should have made provision for specialist service; it should never have flooded the consulting rooms with vastly increased numbers of patients without making certain that the available medical service was adequate to meet the demand. The whole plan bears the marks of improvisation. It was designed for a wide public. It took little thought of the doctor's point of view. A few shillings refund on a petty account is, after all, of little moment.'

Commenting on the New Zealand Services, Dr. Douglas Bobb, in an article in the 'New Zealand Medical Journal,' recently expressed the view that services given by the medical profession in New Zealand had fallen in quality since the war began, both in practice and in hospital. He said the present standard was one with which the profession cannot be satisfied, and that at some time or other the medical profession as a body would have to come forward. Perhaps the main weakness of the arrangements so far made by the Government for medical, hospital and pharmaceutical services, he said, was that no thought had been given to or provision made for the life of medicine. The easy assumption was made that drugs and doctors were there, and all that had to be done was to distribute them and their services. No one wondered what steps would be necessary to ensure that the good product was kept in good order, and perhaps made better with time. He made the constructive suggestion that under maternity and pharmaceutical benefits a percentage of the money should have been earmarked for teaching and research in each subject.

These criticisms surely are worthy of attention. The New Zealand scheme has been acclaimed as the best in operation in English-speaking countries, and, therefore, suitable as a model. We can benefit by the experience of other countries, knowing that the optimum value from that experience can be derived only by critical examination of the defects and deficiencies of their schemes, coupled with a resolve that they shall not be perpetuated here."

In England, a National Health Insurance Act is in effect, and all medicines dispensed under this provision are handled by private pharmaceutical agencies. There is no charge to the patient for services

or materials. Doctors may prescribe anything they wish, within proper care and judgment. Proprietary medicines may be used if non-proprietary ones do not meet the need. Each pharmacy operating under this plan receives from the Government about \$1000 a year, and fills on an average of 5400 prescriptions. This low average price of about 19 cents per prescription is explained in part by the fact that the doctors seem to prescribe simple mixtures in small quantities, and that the customers must bring or pay for their own containers. Certain extensions of the British system are being contemplated for after the war, and these changes seem to favor pharmacy.

In France, privately established pharmacists dispense non-proprietary medicines under a widely accepted insurance scheme, and the schedule of prices and fees has already been established by the authorities.

In Germany, state medicine allows for the filling of certain types of prescriptions by privately established pharmacies, of which the patient has his free choice. There are predetermined price and fee schedules, and, under such a system, each pharmacy is paid on the average of \$1.74 per year per insured person.

As Dr. Fishbein points out in his article in the *American Druggist*, and from which the above facts about England, Germany, and France were gleaned, the systems of medical practice in all European countries have been seriously disturbed in the war period and there are likely to be tremendous modifications in the post-war era. This may be especially true in Russia, where now, in the war period, the government is sponsoring men and women through medical colleges at a rate which enables 24,000 to graduate each year. There are about 106,000 medical students in 52 medical colleges, an average of about 2,000 students in each school.

In our own State of Washington we have had state medicine for some time. The following paragraphs selected from a talk delivered by R. V. Robertson to the 1943 meeting of the American College of Apothecaries will describe some of the experiences under that system:

"The early depression years were marked by the formation of Medical Service Bureaus throughout the nation and our district was no exception. After considerable effort and time there was evolved a plan of prepaid medical care for wage-earning groups, this plan to include free choice of physician, X-ray and hospital care as well as ambulance service, nursing and drugs.

Somewhat contrary to the combined group feeling of the pharmacists, a formulary was worked out and adopted. The thought was that it would

serve the two-fold purpose of making auditing procedure simple and secondly in a large measure control the costs. Experience disproved both contentions, for the doctors refused to prescribe within the limitations of the pages of a book and thus the 'Formulary' died of disuse.

At this stage of our new venture none of us were particularly concerned other than we felt it a nice gesture on our part to cooperate with the local physicians, with always an eye to the future, however, after all concerned had agreed the first venture was not the answer to our problem, the second and most interesting phase was launched. As will be noticed this second attempt points up one of our glaring weaknesses and we can only hope time will provide a solution that proves worthy of ourselves and our profession.

The prescriptions of the Bureau were to be priced on the basis of a pre-arranged schedule, using pints, pounds, hundreds, etc. The resulting chaos of price differentials for the same store, is a subject for discussion in itself. Needless to say, after some three years trying to rationalize this situation with the auditor and manager of the Bureau, we were in for a change and most assuredly got it. Out of this welter of confusion arose a unique system of pricing, namely the employment of a clerk by the Bureau, who priced all the prescriptions, thus eliminating the differentials. You no doubt can think of innumerable objections to such a plan, but suffice it to say that from the standpoint of practicality it works and works well.

Centralized pricing, however, solved only half of the problem, for at this time the Bureau insisted on the acceptance of a bracket system of pricing, for example, for items that cost 21 to 30 cents, we received 45 cents. The objections to this plan are manifest and need no further comment. At the moment an effort is being made to discard the above, and institute a plan that acknowledges time and effort as well as cost.

The next impact on Pharmacy we experienced, came from the State and is socialized medicine in its truest sense. The voters of Washington in 1941 approved an initiative directing the State Department of Social Security to set up a program of medical and dental care for the recipients of Senior Citizen Grants.

At this time the Attorney-General ruled that drugs were not a part of medical care. In December of the same year the Thurston County Superior Court ruled that drugs were a very definite part of medical care as well as all other groups that professed to have any connections with the art of healing the human body. You can well imagine the ensuing scramble to get aboard this 'grave-train'. . . ."

Elsewhere in the United States, we quote herewith the text of a placard sent by the Medical Society of the State of Pennsylvania to every practicing physician in that Commonwealth, to be posted in waiting rooms for patients to see and read:



"DO YOU BELIEVE IN DEMOCRACY?"

"There is now before Congress a bill which provides for the complete regimentation—under government control—of many of your private and personal activities. The bill is known as the Wagner-Murray-Dingell bill.

*"If this bill is passed, you may not select your own physician or hospital. A Government bureau at Washington will be empowered to tell you what physician you must have and to what hospital you must go.*

"In order to carry out the provisions of this tax-supported bill, many new government bureaus will be created. They will make their own interpretations of this proposed law, paid for through an additional 12 per cent payroll deduction, which would tend to impoverish all citizens and destroy democracy in this country.

"Request a copy of the Wagner-Murray-Dingell bill from your Congressman. Read it carefully. If you agree that it threatens your freedom, write to both your Congressman and your United States Senator promptly and tell him what you think about it.

"We who remain on the home front are responsible for what happens in the United States while 9,000,000 of our fellow citizens are fighting and dying for freedom. What is the use of their making the world safe for democracy if we on the home front surrender our common democratic principles?"

Unfortunately, the placard's message contains two errors, as the proposed payroll deduction is to be only an additional 6%, and, under the terms of the proposal, patients will have full choice of physician and hospital.

The late William Allen White, in an editorial in his *Emporia Gazette*, said: "Too much regimentation is what we are fighting against—not what we want. Public ownership of the medical profession comes too near to the Nazi system to be accepted in a free country."

We have related some, but by no means all, of the objections to the Wagner-Murray-Dingell proposals that have appeared in print. In all fairness we should present the opinions of those who are in favor of the enactment. Most widely quoted is Waldemar Kaempfert, science editor of the *New York Times*, who wrote, on August 29, 1943:

" . . . the health of the country has never been better than in this war. Physicians rejoice and accordingly oppose any plan to distribute medical care in a way that will disturb the present system of practice.

"An examination of the statistics convinces this department that health will not always remain good: that signs of danger are apparent. Last year more than 3,000,000 babies were born. The birth rate was high for us, but too many of the newly born will die.

"Too many have already died. The reason is lack of medical and nursing care. We have taken great pride in recent years in our steadily lowering infant and maternal death rates. Now they are beginning to rise again and much of this can be attributed to the unwillingness of doctors to move from metropolitan, non-defense areas to the remote boom towns where they are badly needed."

A. J. Altmeyer, Chairman of the National Social Security Board, addressing the Second War Conference of the American Hospital Association, said, and his remarks pertaining to hospitals may very fairly be assumed to apply to pharmacy as well:

"The social insurance proposals for hospitalization benefits offer no threat to the voluntary hospitals. On the contrary, by offering a new assurance of income, these proposals would give needed strength to all the hospitals and enlarged opportunity for community service. There is nothing in the proposals which intends that the social insurance system shall interfere with hospital operations or invade the field of hospital administration properly reserved to the individual institution. . . . As of the beginning of 1943, the membership in the Blue Cross Plans was 11,000,000, or 8% of the population. There is an annual growth of less than 2% of the population. How many years should elapse, at this rate of growth, before a decision is made that something should be done for 8 or 9 persons out of each 10 in the country who are not insured against the costs of hospital care and who can be given protection through a national social insurance system?"

We have reproduced here some of the "pros" and many of the "cons". The National Wholesale Druggists' Association has issued a 16-page booklet of reprints of editorials and comments gleaned from the public press, and all of the comments are quite definitely and unrestrainedly "con". Regardless of our own personal opinions, we should conclude this discussion with some thoughts as to what pharmacy is planning to do or should do to prepare for the advent of socialized medicine.

As early as 1939, at the same symposium of the School of Pharmacy of the Medical College of Virginia that was warned by Dr. Kelly of the coming of socialized medicine, Dr. A. L. I. Winne noted the already-felt inroads made by several States into the distribution of vaccines, serums and other biological products, by public health units. He stated then that under any plan of socialized medical care it is highly desirable that medical supplies reach the public through established channels rather than through centralized dispensaries. He advocated retention of free right of choice of doctor, dentist and druggist, and closed with the observation that if Pharmacy wants

a place in any plan that may be adopted, it will have to make that place for itself, through strong intelligent effort and considerable initiative and direction, as expressed through its own organization.

Early in 1943, Donald A. Clarke, pharmacist of the New York Hospital, addressing the Philadelphia branch of the American Pharmaceutical Association, sounded once more the call to arms, and stressed the fact that any place pharmacy may have in state medicine, or any benefits to be derived therefrom, must be secured through the work of the profession itself. No one else will hand it to us. He even went beyond the nebulous stage of talking generalities, and suggested that the pharmacists of each community make studies of their own local situations, draw up organization and cost sheets whereby medical supply insurance might be offered to the members of the community, somewhat the same as the Blue Cross plan offers hospital service to members of the community, and at a reasonable profit to the participating pharmacists. To use the vernacular, he advocated "jumping the gun" on any medical supply plan that may come through the auspices of the government.

It seems, however, that we are still in the talkative stage of opposition to the actual coming of state medicine. Few doubt that eventually it will come in some form. If nothing can be done actually at the present time to see to it that pharmacy has its rightful place in the scheme, we, as individuals, and our organizations for us, must be on the watch to provide that place when the present more or less general plans finally crystallize.

Too active opposition to socialized medicine in general brings as much adverse public opinion as does the plan itself. For instance, Fulton Lewis, Jr., writing in the *Philadelphia Inquirer*, says:

"The American Medical Association, headed by snow-crested Dr. Olin West and the ubiquitous Dr. Morris Fishbein, have stirred a dizzy dither about it among the already overburdened and harassed doctors of the country.

"They have circulated ominous articles from their medical journal. National conferences have been called. Messrs. Wagner and Murray have been labeled the pre-eminent public enemies of medical science in the United States.

"The truth is that neither Senator Wagner nor Senator Murray commands sufficient influence in the present Congress to be a competent enemy of medical science or any thing else. The Wagner-Murray bill hasn't a stepchild's chance of being passed.



"The tragedy is that far behind this frenzied boxing-bout against shadows of the moment, are powerful realities which eventually are certain to explode.

"The vast majority of rank and file doctors of the country—and I've talked to hundreds of them—seem to sense these practical realities, and comprehend the import of them.

"Those realities are, that until the politician is robbed of this bait, which he dangles before the public eye, other Senator Wagners and other Senator Murrays will continue to use that bait, making a little more progress each time.

"When the war is over, and tens of thousands of Army and Navy doctors face the problem of returning to private competitive practice which will be infinitely more crowded than ever before, many of them may be distinctly friendly to the security of the steady salary of Government medicine.

"But the A. M. A.'s only answer is to rant against the dangers of it, and the injustice, and to try to make the realities non-existent, by the mere denial that they exist.

"That is suicide. If their own interests were all that is at stake, the suicide wouldn't matter. But it's not. If the tawdry, searing paws of politics ever set their grip on American medicine, it's the people as a whole who will suffer, far more than the doctors and far more than the American Medical Association."

What the *Philadelphia Record* says editorially about medicine may well apply to pharmacy:

"Unless they (the medical profession) are prepared to offer measures to make medical care available to more people, without excessive financial burden, the demand for Government intervention will ultimately win.

"The present system, it seems clear, is dying.

"Probably the most constructive 'middle road' program, a compromise between the old way and Federal medical insurance, is expansion of group medicine along the lines of the Blue Cross. . . .

"The survey by the National Physicians Committee at least indicates that the medical profession is waking up to the fact that if people cannot obtain group medical care, at rates they can afford, they will turn to Government sooner or later.

"The issue is clearly up to the medical profession."

## HOW AGRICULTURAL SCIENCE FIGHTS THE WAR

By T. Swann Harding

**Y**OU would scarcely think that our armed forces, our allies, and our civilians are better fed today because an observant scientist looked carefully at a pear tree on his way down to work in the Department of Agriculture in the Gay Nineties. But that is how research works out. It gives us an accumulated store of knowledge which is incredibly valuable in emergencies such as world wars.

Originally the diseases of trees and plants were regarded as mysterious visitations of Providence about which very little could be done. But the erratic behavior of such diseases, which often appeared suddenly and swept all plants of certain varieties from entire districts, eventually made those basic producers who depend economically on the good growth of plants, the farmers, demand that something be done.

In 1878 T. J. Burrill, of the University of Illinois, demonstrated that pear blight, a disease then devastating the pear orchards of the United States, was caused by a bacterium. He named it in 1882, and it was the first germ ever definitely proven to cause a tree or plant to get ill. But the whole idea seemed pretty absurd and most scientists, including a lot of smart Germans, laughed at the idea.

In 1888, M. B. Waite joined the staff of the Department of Agriculture and was assigned to pear blight. It was he who began to observe a pear tree pretty closely as he came down to work. What puzzled him was that the tree would be perfectly healthy one day, but the next would be blighted all over. It was more than he could understand how a germ could get into every blossom on a pear tree in one day—that is until he thought of honeybees.

Honeybees really got around, Waite reflected. They wiped their feet on any blossom they dived into. If pear blight was caused by a bacterium, was it possible that honeybees spread it by carrying the germs around on their bodies and infecting the blossoms? That is just how the matter turned out. Waite found the germs on the mouth parts of the bees and he produced pear blight from them by inoculating the tree blossoms.

Again there were skeptics. One of them was an old country doctor on the Eastern Shore of Maryland who attended my grandfather's family. He wrote in and dared Waite to bring on his bees and his germs and try to infect his fine orchard. Waite came, the bees conquered, and the doctor was a pretty sick man when he saw his orchard all blighted.

Meanwhile another Department scientist, Erwin F. Smith by name, began to gain acceptance for the theory that bacteria could cause plant diseases. He had joined up in 1886. He performed many careful detailed experiments to prove his point and finally engaged in a hot printed argument with Alfred Fischer, a German who opposed his findings. By 1901 Smith had firmly established the scientific fact that bacteria caused plant diseases. His persistence got the idea over.

One of Smith's assistants was a young New Englander named William A. Orton. He was assigned to cotton wilt, a disease caused by a fungus. Though he had never seen a cotton plant in his life, he went South to look such plants over and devise, if he could, a method of controlling the wilt, which was entirely destroying the crop in large areas.

Almost immediately Orton observed that certain cotton plants failed to contract the disease. He hazarded the guess that this resistance might be hereditary. He was right, and he later demonstrated that it was possible to select resistant children from a population containing disease-resistant cotton parents. The way was thus paved for much research on plants of many kinds which are of economic importance. These three discoveries, in fact, formed the basis for our modern methods of attacking plant diseases.

Naturally plant doctors, or phytopathologists, can't go around asking the poor things where it hurts, feeling their pulse, and prescribing a little quinine or vitamin Q. When a plant gets sick it usually dies, or turns out to be of no monetary value, and there is finality about that insofar as the farmer is concerned. So plant doctors have to devise methods of fighting off insects which spread plant diseases, and of breeding varieties which resist them.

This work has been of untold value. Now when food production is so important, its success enables us to protect food crops and to increase their output. The work has been applied to practically every plant that produces food or fiber for man. It must be continuous, of

course, as new diseases pop out of the woods constantly and the germs of well-known diseases often become more malignant for mysterious reasons.

Here was an immense background of verified knowledge all ready to use when we went to war. But hundreds of other helpful things had been done by the Department of Agriculture's scientific staff, too. Thus the development of hybrid seed corn, in which they had a good part, added 300,000,000 bushels to the 1942 crop, and aided us in turning out an additional 3.3 billion pounds of pork, half the total meat tonnage needed that year for military and Lend-Lease use. Here basic research in genetics on a program started forty years earlier made good in a big way.

Waxy sorghum, developed from a glutinous Chinese variety grown in the United States since 1854, was found to offer a substitute for root starches in making mucilage to go on stamps and envelopes. Home-grown waxy corn, a kind also containing a special type of starch suitable for food and certain industrial uses, came into its own. The breeding work in this instance started in 1936 on material sent from China by a missionary, and a substitute for tapioca was developed, a product we usually imported from the Netherland Indies at a rate of 350,000,000 pounds annually.

Substitute oils were sought and found in such things as apricots, prunes, cherry pits, English walnuts, avacodoes, tomato seed, grapefruit seed, orange seed, lemon seed and rice bran, but research on these had long been carried on. A belladonna crop was ready when imports were cut off by the war, because Department scientists had anticipated this need as early as 1940, had put in a small plot, harvested the seed, and built up a supply.

Department specialists were ready not only to help the Army prevent mildew and damage by micro-organisms in sandbags and other articles made of cloth, but to aid housewives in judging the substitute textiles and fabrics the war brought forth, and to design clothing to fit work conditions, along functional lines, simpler and more sturdy. Because the wear on blankets and sheets had been tested in carefully controlled experiments, the armed forces had valuable information to go on with respect to these.

Because the vitamin values of all common foods had been tested and tabulated, diets at different income levels were immediately available. As rationing came in and food shortages developed, informa-

tion based on research was right on tap to aid those who wanted to know how to use substitute foods and to attain good nutrition within the limitations of ration coupons.

Other research findings of Department scientists have aided in food processing and production generally. A substitute lacquer made in large part from lactic acid, was hit upon to replace former imports. It proved excellent for coating cans used to contain condensed, evaporated and fluid milk or cream.

Very useful findings were made in the field of food dehydration which became important immediately we got well into the war. These were based, it is true, upon painstaking investigations over many years past, but they were quickly headed up by several agencies in the Agricultural Research Administration, and practical results promptly emerged.

A mobile laboratory went on the road to help plants over difficulties in making dried eggs. A new method of making more concentrated milk than had ever been packaged was devised; but, when the call came for dried whole milk, a process was perfected for that too, although the product had always had high spoilage previously.

Cheese factories were assisted to develop and adopt methods of operation which eliminated the under-grade cheese that became common when so many new factories started up in order to supply Britain with cheese. The accumulated store of knowledge on poultry nutrition was drawn upon to increase poultry and egg production. Artificial vitamin D was found to be as good for chicks as cod-liver oil; other feedstuffs were shown capable of replacing the dried skim or buttermilk hitherto used to feed them. Soy bean meal was proved to be as good a source of protein as meat scrap, and sweet potatoes an excellent source of vitamin A for chickens.

The work of Marion Dorset on hog cholera, done many years ago, now served to increase our wartime pork output. There was also ready a vaccine against swine erysipelas, a disease second only to hog cholera in its destructive power. Department of Agriculture scientists helped the British Ministry of Agriculture and Fisheries cope with Bang's disease; this aid was based on earlier research upon an effective vaccination method.

Department scientists had found that phenothiazine was excellent to control worm parasites of sheep. New labor-saving methods of medicating the sheep with the drug were devised. That chemical was



mixed with salt and the sheep consumed it voluntarily. This procedure protected their health, and increased both the meat and wool supply. Furthermore, as an unearned increment, the intestines of the sheep were not perforated by worm parasites, hence were acceptable for surgical sutures at a time when these were urgently needed.

When the Lend-Lease Administration asked how to treat two million sheep in North Africa for mange and worms, in order to render them useful to the armed forces and civilians there, the answer came in three hours from a Department of Agriculture parasitologist. But this answer was based on a huge index of 100,000 parasites that plague man and animals all over the world. It had been compiled by painstaking work over many years. It is arranged geographically, by species, and also by the animals affected. When the call came it was ready.

The entomologists did their share too. For instance, they quickly developed three effective methods of protecting men in military training from the stinging bites of dog flies. This was the culmination of research undertaken originally because the fly was a serious pest of cattle. Its breeding places were discovered to be marine grasses, celery waste, and peanut litter. Elimination of these largely eliminated the flies.

Men were rapidly trained to make mosquito surveys, to identify the carriers of yellow fever and malaria, and to protect the men in the armed forces. Substitute insect poisons were developed to replace lost imports. The nicotine content of tobacco was increased by breeding special strains so that we might have more for insecticides, as well as more of the important anti-pellagra vitamin nicotinic acid or niacin.

Sodium fluorsilicate was shown to be a good substitute for sodium arsenite in killing grasshoppers. An insecticide from the plant, devil's shoestring, was found to contain a chemical that could replace rotenone to some extent. A final discovery made insecticides go much further by the "aerosol" method.

In this operation a liquefied gas was used as the carrier for a poison spray. Thus the poison was divided into very minute particles which did not settle quickly when sprayed, but hung in the air for a long time. Economy and effectiveness both were gained. A cylinder of liquid gas, such as is used in some types of fire extinguishers, could be loaded with a very minute dose of nicotine, say, and sprayed

under its own pressure. It could be used even in occupied rooms. The nonpoisonous gas stained neither paper or fabrics, while valuable spray material was conserved.

Chemists also were busy. Not only were they investigating various plants containing natural rubber, like goldenrod, guayule, and Russian dandelion, but they also made a promising rubber substitute called "Norepol" from soy bean and other vegetable oils. They found that sodium perborate could be used as a stain remover and to bleach all types of material, replacing many chemicals cut off by the war.

The chemists also devised grease-resisting coatings for paper that would make packaging materials to replace cans for putting up many food products. They found new rubber extenders and new plastics, using farm products or by-products as raw material. These products assumed new importance in wartime, when carbolic acid is diverted into detonators and is no longer abundant to make phenolic plastics, and cellulose goes into nitrocellulose rather than into plastics.

Agricultural engineers in the Department developed methods of cutting cotton into uniform short lengths so that it could be used in existing commercial equipment to supplement linters for making smokeless powder. They also designed improved machines for handling flax, when our flax supplies from Europe were cut off. Likewise their researches improved the machines used in harvesting and otherwise processing flax, though this work was done long in advance of emergency needs.

Twenty or thirty years ago H. H. Bennett began to clamor for attention to soil conservation. Largely as a result of his agitation a Soil Conservation Service came into existence with a network of experiment stations where research was performed to aid us in solving the soil erosion problem. As a result of this long-term research plant nutrients were stored in the soil, erosion-scarred areas were healed, water conservation was widely introduced, and many idle acres were restored to usefulness.

That such conservation practices increase agricultural production is now well established. This is true not only of crops, but also of livestock and milk animals, for better pastures based on soil conservation mean more milk produced. Acres that formerly produced only five bushels of corn produce as high as fifty, at times, after soil-conserving crops are grown on them. Many submarginal areas, when turned into pasture and protected by grasses and forage plants,

produce meat and milk in abundance. Thus research performed years ago cashes in during wartime emergency.

Many of the wartime activities of the Soil Conservation Service, like those of the Forest Service, must remain secret till after the war. The former has aided the Army in locating forts, cantonments, and air bases, as well as in camouflage work. In many cases its scientific experts have saved the armed forces hundreds of thousands of dollars by giving timely advice on flood and erosion control near various forts, posts and stations.

As to the Forest Service—naturally increased protection against forest fires is necessary in wartime. The volume of timber used increases, and this must be cut with as little damage to the forests as possible. The Forest Service has also been engaged in work on growing plants that contain rubber, finding substitute sources of tannin, developing substitutes for cork, and devising new and improved uses of wood for war.

The Forest Products Laboratory at Madison, Wis., has been prominent in the last-named projects. It has worked closely with aircraft manufacturers on the design and fabrication of wooden airplane parts. It has developed "compreg," a new material formed by the compression and impregnation of wood with phenolic resins to give it the strength properties of mild steel. This has been adapted for use in aircraft spar plates, propellers and landing wheels.

Research on boxing and crating has been greatly expanded. A new type of interior paint has been devised which retards the spread of fire in wood construction. Wood plastic has been adapted to replace hard rubber for use in storage battery cases and tops. It was shown that 90 per cent of the metal in automobile house trailers used by war workers could be replaced by wood. Substitutes for hemp and sisal were sought by investigating the yucca group of desert plants in the southwest.

Here, as elsewhere, research that had been carried on for years before proved invaluable in wartime. This was especially true of scientific knowledge about trees and plants generally, the work in finding new uses for wood, forest economic information, forest survey data, and research in forest management and forest influence on the water supply, on flood-control problems, and on improving the production of meat, hides and wool.



Hence, without knowing it, many quiet, peaceable, underpaid scientists in the Department of Agriculture began to fight this war years and years ago, some of them in the Gay Nineties and earlier. Many of these investigators have retired, or have passed on to other worlds. Some of them may contemplate the wartime use of their discoveries with no little chagrin, if they are capable of doing so, and are doomed to watch the warlike antics of mankind.

Research is like an iceberg. What you see above water is a very small fraction of the whole. There is a great deal you do not see or hear about. Yet, in some emergency to come, it is there to draw upon. Often it proves to be just what was needed. There can be no sounder investment than that in the carrying on of scientific research, and none produces a greater unearned increment, which passes on down through the ages long after the original investigators are dead and perhaps utterly forgotten.

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**Chemical Sterilization of Instruments.** M. L. Tainter, A. H. Thronson, R. R. Beard, R. J. Wheatlake. *Jour. Amer. Dental Assoc.* 31, 479 (1944). Sterilization of instruments at room temperature without corrosion may be accomplished through the use of the following mixture:

Isopropyl alcohol .....	1.0 L.
Oil of rose geranium .....	2.0 cc.
Oil of cinnamon or cassia .....	4.0 cc.
Distilled water .....	780.0 cc.
Sodium nitrite .....	4.0 Gm.
Monoethanolamine, or Triethanolamine.	60.0 cc.
Solution of formaldehyde, U. S. P. ....	160.0 cc.

The ingredients should be mixed in the order given.

## SPENDING AND SAVING

By Karl Scholz, Ph. D.\*

THE idea is widely prevalent that if a person saves a part of his money income he does not spend it. On the other hand, if he spends it, he does not save it. This may be true, insofar as he is concerned, but if he invests his money savings in one form or another, someone else who gets these saved funds will presumably spend them. Ordinarily neither individuals nor business concerns borrow money in order to hold on to it as idle cash. They want to spend it. Moreover, when a person places his money savings in a savings bank or buys life insurance, these financial institutions, in turn, make the funds thus saved available for spending by someone else.

As long as savings are invested, whether in the purchase of securities, deposits in savings institutions or payments of debts, they will be spent by their recipients, either to buy consumer goods or investment goods. Saving and spending, spending and saving are therefore essentially the same, so long as one person's savings are spent by someone else to pay for goods and services.

But anyone who saves a part of his money income may also hoard it, in the form of "idle cash" or "idle bank deposits." Business concerns, moreover, may hoard cash, or pay off bank loans, realized from the sale of inventory which is not replaced with new production of goods. There are a number of reasons why anyone might prefer to keep his savings liquid, i. e. in the form of cash, rather than as investments. The interest rate may not be enough of an inducement to cause him to "tie up" his funds in securities, with possible uncertainty as to their later repayment at face value. Moreover, he may anticipate a rise in interest rates, and hold on to his cash now, in anticipation of a larger return by investing at a later date. Again, he may expect the prices of goods to rise, and so want to be ready to buy goods with his cash "on short notice" rather than have his funds invested in securities, which he may have to sell at a loss in order to get cash quickly. Or he may fear the loss of his job at any time, and so hold on to his cash to tide him over.

For all such reasons individuals may prefer cash savings rather than investments. This preference has been designated by economists as "liquidity preference." The aggregate effect of widespread hoard-

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ing of cash, beyond reasonable needs for current funds, is not without serious consequences to our economy. If our economic system is to function smoothly and continuously, the money savings of the people must be kept "in circulation" by investment of one kind or another. Any interruption of this process of continuous spending of savings results in idle resources, unemployment, and if carried far enough, will precipitate a serious depression. Money that has been earned by the producers of goods must be spent to buy those goods, unless they are to become a drug on the market. Moreover, if those who have incurred the money costs of producing goods cannot sell them to cover these costs, because people refuse to spend their incomes or fail to make them available to someone else to spend, prices may have to be slashed to attract buyers, which again leads to unemployment and business stagnation.

It has been facetiously remarked that the quickest way to impoverish a whole nation is for the people to refuse to spend their money. But it must be clearly borne in mind that both saving and investing are essentially forms of spending. Hoarding, or non-spending, on the other hand, is a type of saving, which may be viewed as an individual virtue, but if sufficiently extended, may become a national calamity.

Idle money and idle men will not be tolerated indefinitely in any sane society. Idle money creates the very conditions of insecurity to investment and instability of employment, against which individuals try to hedge by hoarding their money. If we would help to avoid such conditions, we must be made to realize that spending and investing of savings are essentially the same. We can help keep business on an even keel by not hoarding our savings, but by making them available for the continuous employment of our productive resources, upon which our national prosperity depends.

Too much saving will not lead to national impoverishment, as some pessimistic observers would have us believe. But savings must be invested if they are to add to the national well being. It is only idle savings, hoarded funds, which cause trouble.

It should therefore be made a major concern of private enterprise, cooperating with governmental agencies in the post-war period, to see to it that adequate investment opportunities are provided for the savings of the people. Only thus will it be possible to remove a major cause of hoarding of money savings, with its impoverishing effects on our whole economy.

## **RUSSIAN PHARMACOPOEIAS AND A METHOD FOR THEIR CLASSIFICATION**

By Edgard Yan Allen, M. Sc.

**T**HE Russian Pharmacopœia, which may be considered as a well established part of Russian culture and civilization, has existed since the eighteenth century. Its editions are numerous and may be classified in the following manner:

1. Russian Pharmacopœias written in Latin.
2. Russian Pharmacopœias written in the Russian language.

This classification may be further subdivided into "Civilian Pharmacopœias" and "Military Pharmacopœias". To further facilitate this work it is necessary to consider the various Pharmacopœial Editions as belonging to one of three periods, namely:

1. Early Russian Pharmacopœias written in Latin.
2. Russian Pharmacopœias of Czarist Imperial Russia written in Russian.
3. Russian Pharmacopœias of the U. S. S. R. written in Russian.

### **I. Early Russian Pharmacopœias Written in Latin**

During the eighteenth century the Russian Pharmacopœia was issued in the Latin language. The first Latin Edition appeared in 1770 and the last (Fifth Edition) in the year 1803. Several "Military Pharmacopœias" were also issued. The First Military Edition was issued in 1779 and the Fourth Edition (Pharmacopœia Castrensis Ruthenica) in the year 1840.

### **II. Russian Pharmacopœias of Czarist Imperial Russia Written in Russian**

The first edition in Russian appeared in the year 1866. The other volumes were issued as follows:

*EDITION		YEAR ISSUED
RUSSIAN PHARMACOPŒIA	II .....	1871
" "	III .....	1880
" "	IV .....	1891
" "	V .....	1902
" "	VI .....	1910

### III. Russian Pharmacopœias of the U. S. S. R. Written in Russian

The first Pharmacopœia of the U. S. S. R. was issued in 1925 under the name of "Government Pharmacopœia, Seventh Edition", abbreviated ( $\Phi$  VII). This edition came out in separate supplements in 1925, 1929, 1934, and 1937. The last supplement was somewhat revised. In 1942 work had already been undertaken to compile the new or Eighth Edition of the Government Pharmacopœia U. S. S. R.

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**Which Ointment Base?** L. W. Busse. *Pract. Ed. Journ. Amer. Pharm. Assoc.* 4, 314 (1944). The author discloses that when sulfonamide ointments are spread over the skin in thin films, the drug is absorbed rapidly from all types of preparations, but when a compact mass of the ointment was used, and embedded in the tissues, absorption of the drug was delayed considerably if the base was an oily medium, and that an oil-in-water emulsion delayed the absorption somewhat but not as much as the oil.

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\* The last or Third Edition of the Russian Military Pharmacopœia in Russian was issued in 1913.

## SELECTED ABSTRACTS

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**The Use of Fluorine in the Prevention of Dental Caries.**  
**II. Effect of Sodium Fluoride Applications.** B. G. Bibby. *J. A. D. A.* 31, 317 (1944). Clinical observations on a group of children from 10 to 13 years of age revealed that six topical applications of 1:1000 sodium fluoride solution over a period of two years reduced dental caries by more than one-third.

The number of patients at the start of the study was 100, but only 80 completed the full course of fluoride therapy. Only one quadrant of each mouth received treatment; the quadrant on the opposite side of the same jaw was used as a control. A routine cleansing of all teeth was performed prior to the treatment. The test side was isolated with cotton rolls, after which the surfaces of the teeth were dried with cotton swabs, alcohol, and air. The sodium fluoride solution was then repeatedly applied during seven or eight minutes to all surfaces of the teeth in the selected quadrant. On completion of the treatment the cotton roll was removed, and the mouth was thoroughly rinsed with water.

There was an increase of 173 definite and questionable cavities in the teeth which received the fluoride treatment, as compared with 239 in the teeth which served as controls. Especially noteworthy was the reduction in the incidence of new caries; over the two-year period there were 83 new cavities in the treated teeth and 124 in the controls.

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**Sensitivity to Topical Application of Sulfathiazole Ointment.**  
R. A. Darke. *J. A. M. A.* 124, 403 (1944). In a series of 218 cases treated by the local application of an ointment consisting of 5 per cent of sulfathiazole sodium, 30 per cent of anhydrous wool fat, 40 per cent of white petrolatum, and 25 per cent of water, there were 12 cases (5.5 per cent) of sensitivity. The cases included 73 lacerated wounds, 16 ulcers, 41 contused and abraded wounds, 38 burns, 12 amputations of fingers or toes, and 28 miscellaneous infections and other conditions.



Four patients exhibited sensitivity to the drug in from one to six days; the remainder had a low grade sensitivity which was noted clinically to inhibit healing. The reactions were either acute or chronic, the former consisting of a generalized erythematous macular or papular eruption (vesicular or pustular in some instances), and the latter of a condition of epidermolysis with an exposure of the underlying skin layers. Pruritis was always present in the acute cases and frequently in the chronic cases. The percentage of patients showing sensitivity to the drug in this study is in general agreement with observations previously reported by other investigators.

It is becoming recognized that a patient under topical treatment with sulfathiazole ointment may develop acute local and general symptoms following oral administration of the drug. Since this sensitivity may prevent use of the drug in the therapy of pneumonia, meningitis, and gonorrhea, it is important that the topical use of sulfonamide preparations be limited to cases in which there is a specific need for such treatment. The author cautions against the indiscriminate use of such preparations in minor conditions which may be treated adequately by means of other drugs.

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**Penicillin in Gas Gangrene.** W. B. McKnight, R. D. Loewenberg, and V. L. Wright. *J. A. M. A.* 124, 360 (1944). The authors present a report on a case of compound fracture of the forearm complicated by gas infection. Early treatment included the local use of sulfathiazole and the administration of 1,500 units of tetanus antitoxin. On the fourth day of treatment a diagnosis of gas gangrene was made. Accordingly 20,000 units of gas antitoxin were injected intravenously, 3 gm. of sulfathiazole were given orally, and incisions in the forearm and hand were made, after which the area was treated by irrigation with hydrogen peroxide solution, application of sulfathiazole, and exposure to high voltage x-rays.

The administration of an additional 40,000 units of antitoxin and continued sulfonamide medication failed to halt the progress of the infection, and consequently a high amputation of the arm was performed, followed by the administration of blood plasma. Penicillin became available for use on the seventh day of treatment; 20,000 units in isotonic solution of sodium chloride were given intravenously, followed by 40,000 units by the continuous drip method. Twice during the course of penicillin therapy the drug was given by intra-

muscular injection into the stump. A total of 240,000 units was used throughout the course of medication.

The condition of the patient gradually improved under anti-anemic and symptomatic treatment; the case was discharged from the hospital one month after admission, although ambulatory treatment was continued for an additional month.

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**Insulins and Insulin Modifiers: Intradermal Studies.** R. L. Page and L. Bauman. *J. A. M. A.* 124, 704 (1944). Cutaneous tests with various insulins and insulin modifiers were performed on a group of 91 non-diabetic allergic and 81 diabetic non-allergic patients. All of the diabetic patients had previously received therapy with insulin of one or more types.

The substances used in the studies were as follows: protamine, total globin (beef), native globin (beef), globin (human), insulin (beef), crystalline insulin (zinc-free), and two insulin compounds, *vis.*, insulin (*p*-azobenzyl-trimethylammonium chloride) and insulin (*p*-azobenzenesulfonic acid). In addition, two control solutions were used: (1) potassium acid phosphate, pH approximately 3.5; (2) zinc chloride, containing 4.8 micrograms of zinc in each test dose of 0.02 cc.

Zinc chloride, beef insulin and protamine were found to be the most irritating of the preparations tested. The allergic group displayed a much higher incidence of sensitivity to protamine than did the diabetic group. The percentage of positive reactions to the various globins was low in both groups. In the diabetic group the percentage of reactions to beef insulin was five times greater than to crystalline, zinc-free insulin.

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**Oral Sodium Lactate in the Treatment of Burn Shock.** C. L. Fox, Jr. *J. A. M. A.* 124, 207 (1944). Isotonic solution of sodium lactate was administered orally to treat shock in seventeen cases of extensive third degree burns. Successful results were noted in all but two cases; in the latter, death occurred 35 days after the admission of one patient, and after 4 hours in the other case. Skin grafts were performed in the majority of the cases.

On admission of each patient and at intervals thereafter, a blood sample was taken for immediate analysis by hematocrit for relative

cell volume, and the plasma for total protein, albumin: globulin ratio, chlorides, carbon dioxide combining power, sodium, cephalin flocculation capacity, amylose, icterus index, direct and indirect bilirubin, sugar, and urea.

From 7 to 10 liters of isotonic sodium lactate were administered within the first twenty-four hours. If vomiting was present, additional solution was given. Frequently the solution was administered by a constant drip technic in which a small Levine tube was passed through the nose. Fluid administration on the subsequent days was so adjusted as to obtain from 1 to 2 liters of urine daily. When food was tolerated, a high protein diet was given; in addition, patients with extensive burns received orally from 50 to 100 gm. of amino acids ("Oramin" Warner) daily.

Local treatment consisted of applications of a water-soluble ointment (pH 7.6) containing 5 per cent of tannic acid as a neutral tannate and 3 per cent of sulfadiazine or sulfathiazole as a soluble salt. Throughout the course of treatment the urine was examined for its content of sodium, chlorides, sulfonamide, tannates, creatinine and creatine.

The first two patients of this group received 200 cc. each of plasma, in addition to the other treatment described, but there was no evidence that this small amount influenced the favorable outcome.

This preliminary report is to be followed by a paper which will describe studies on the circulation of the shock group, with measurements of the changes in electrolytes and body water and radioactive sodium in cases treated with plasma or sodium lactate.

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**Clinical Experiences with Dicumarol: Report of Eighteen Cases.** H. D. Zucker. *J. A. M. A.* 124, 217 (1944). Dicumarol was administered orally to 18 patients with various indications including thrombophlebitis, embolism, cavernous sinus thrombosis, and as a prophylactic procedure following surgery. The initial adult dosage was 300 mg., followed by a 200 mg. dose on the following day. Subsequent dosage was designed to maintain the plasma prothrombin time level between 60 and 30 per cent of normal.

All patients were classified according to blood group prior to therapy. Determinations of the plasma prothrombin level were made daily (except on Sundays); hemoglobin determinations and red blood

counts were performed every second day. Microscopic urinalyses were performed frequently for the detection of red cells.

In addition to dicumarol each patient received such medication or treatment as was prescribed by the physician in charge, *e. g.*, sulfadiazine in 7 cases, and the application of ice bags over the affected region in the cases of thrombophlebitis.

One patient developed a petechial rash and a transient purpura during the course of treatment; 4 other patients exhibited transient microscopic hematuria. No other evidence of toxicity was observed. All patients had uncomplicated recoveries.

The drug appeared to have a beneficial effect in cases of thrombosis and embolism. There was a striking relationship between the disappearance of pain and the achievement of hypoprothrombinemia. Control of the prothrombin level during the administration of dicumarol presented some difficulty, but the method of dosage employed proved effective and safe in this series. The author is of the opinion that dicumarol cannot replace heparin in emergencies demanding anticoagulant therapy, and that it should not be used as an alternative to indicated surgical procedures.

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**Reactions to Sulfonamide Compounds.** T. F. Frist. *War Medicine* 5, 150 (1944). Conditions known to be amenable to sulfonamide therapy may be treated with relatively little danger if, according to the author, the patient is examined at least every other day for rash, conjunctivitis, jaundice, diarrhea, arthritis, drug fever and chills. An examination for hematuria should be done every third day. Fluid intake and output should be maintained in adequate quantity and sodium bicarbonate should be given with each dose of the drug. It should be remembered that patients with previous toxic manifestations are liable to have subsequent and more serious reactions to the sulfonamides.

## BOOK REVIEWS

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**Synthetic Menthol: A Collection of the Literature Concerning Its Pharmaceutical Properties and Its Uses.** Edited and published by Givaudan-Delawanna, Inc., New York, N. Y., 1944. vi + 238 pp. paper-bound.

This book is comprised of a collection of sixteen papers reprinted from the literature dealing with the toxicity and the pharmacological action of menthol and its stereoisomers. In addition, the menthol monograph of the Fifth Addendum to the British Pharmacopœia, 1932, is included, as well as two reports of toxicity studies on *l*-menthol, racemic menthol, and *dl*-menthol performed for Givaudan-Delawanna, Inc., by the Applied Research Laboratories, Inc.

Papers from the German literature have been reprinted in that language, in order to preserve accuracy. A Japanese article appears in German, as it did in the original. A Swedish article is the only one which has been translated into English. An editorial note explains that in a few instances in which the original paper contained an obvious typographical error, corrections have been made and footnotes inserted to call attention to these changes. In some cases it was found necessary to omit pictures from the foreign articles, owing to technical difficulties involved in reproducing them from the copies of the journals available.

The dates of the original publications are from 1923 to 1942, inclusive. Chronologically, the list of authors is as follows: 1923, anonymous; 1926, Fleury and Seel; 1927, Seel; 1928, Hirsch; 1932, Gershenfeld and Miller; Wokes; 1933, Schimmel and Co., A. G.; Unger; 1936, Winterfeld and von Cosel; 1938, Wagner; 1939, Macht; 1940, Bliss and Glass; Masaki and Amano; Schmidt; Steenberg; 1942, Huggett.

Preceding each paper is a brief summary of its contents written by Dr. Kurt Oesterreich. The publication of the material was under



the guidance of Dr. Eric C. Kunz, president of Givaudan-Delawanna, Inc., who also wrote the introduction, and of Dr. Alfred Ofner, research chemist associated with the same firm. Edward Sagarin prepared the material for publication.

The book is distributed gratis to chemical and pharmaceutical firms interested in the subject. It should be valuable as a time-saver to persons engaged in a literature search for information regarding the toxicology and pharmacology of the various menthols, viz., menthol, *neo*-menthol, *iso*-menthol, and *neo-iso*-menthol. Each of these exists in both the dextro and laevo modification, making a total of eight optically active stereoisomers; in addition, the *dl* or racemic mixture of each pair is possible.

A. A. DODGE.

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**The Extra Pharmacopoeia (Martindale), 22d Edition, Vol. I** (1941). C. E. Cornfield, et al., editors. The Council of the Pharmaceutical Society of Great Britain. xxxviii + 1289 pp. Price: 27/ 6d, plus postage.

Volume I of this new twenty-second edition of *The Extra Pharmacopæia* was just received by the reviewer as a result of war conditions. The delay, however, in no sense diminishes the importance of this review. To one who has long been acquainted with the unique quality and utility of this reference this new edition is no disappointment.

Volume I is arranged along similar lines as its counterpart of the previous edition. The body of the text is composed of a very comprehensive list of official and non-official drugs arranged alphabetically. Under each heading one finds up-to-date and reliable information which is specifically selected so that it will be helpful to the pharmacist and the pharmaceutical chemist. The editors have included references for many of the facts which are incorporated in these monographs greatly increasing their value.

Special sections include a list of abbreviations of periodicals, tables of weights and measures, poisons and their legal regulations and a therapeutic index of diseases. The general index at the end of the book is very comprehensive.



Supplement to Vol. I, 22d Edition (1943). Price: 2/.

This brief supplement primarily lists the changes in the scope of the B. P. C. as occasioned by its several addenda as well as the changes in scope of the U. S. P. XII and N. F. VII. It also includes a list of corrections to be applied to Vol. I.

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Vol. II (1943). xxxiii + 1217 pp. Price: 27/ 6d, plus postage.

Volume II of this twenty-second edition is likewise a worthy companion to Volume I. It deals with subjects auxiliary to those in the first volume but it is nonetheless valuable in its usefulness as a reference. The wide variety of its contents will be an agreeable surprise to one who examines it for the first time. It contains very well-founded chapters on such diversified subjects as proprietaries, chemotherapy, polarographic analysis, microchemical analysis, clinical chemistry, nutrition, examination of foods, sterilization procedures, diathermy, X-ray diagnosis and many similar others. A very excellent index covering both Volumes I and II is appended.

The amazing thing to one who for the first time acquaints himself with *The Extra Pharmacopæia* is the almost unbelievable quantity of reliable information that is to be found in these very small and outwardly unostentatious volumes. In fact this work is undoubtedly as valuable as our own United States Dispensatory yet not nearly as massive. It is the opinion of your reviewer that these two volumes of the 22d edition of *The Extra Pharmacopæia* should be in the library of every progressive laboratory, college or establishment associated with pharmacy. They are without doubt the most useful reference in pharmacy coming from overseas.

L. F. TICE.

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**Harofe Haivri (The Hebrew Medical Journal), Symposium on War Medicine.** Edited by Moses Einhorn, M. D. New York.

Harofe Haivri is published semi-annually. Volumes I and II for 1943 are devoted to a symposium on war medicine. Among the subjects discussed were: "The Treatment of Gunshot Wounds of the Head and Brain During the Present War" by Dr. Leo M.

Davidoff; "The Early Treatment of War Wounds With Emphasis on Prevention of Deformities" by Dr. J. W. Maliniac; "Some Personal Observations on Military Surgery" by Dr. Ed. K. Barsky; "Newer Conceptions of the Treatment of Burns" by Dr. Jesse Bullowa and Dr. C. L. Fox, Jr.; "The Status of Anesthesia in Military Surgery" by Dr. S. D. Ehrlich; "Shock Syndrome and Its Treatment" by Dr. S. Standard; "Ocular Injuries in Chemical Warfare" by Dr. Ed. B. Gresser; "Physical Therapy in War Medicine" by Dr. Wm. Bierman; and "The Importance of the Proper Prosthesis in Post-War Rehabilitation" by Dr. H. M. Wertheim.

The original articles are summarized in English although an English-Hebrew medical dictionary is included for those who wish to translate.

A section on "Personalalia" includes biographical sketches of Adolphus S. Solomons, Co-Founder of the American Red Cross, and Professor Max Neuberger, the great medico-historian.

One article is devoted to the Kupat Helim—Worker's Sick Fund of the General Federation of Jewish Labor in Palestine which is the largest institution of its kind in the Near East, having a membership of 96,000. It provides hospitalization, rural dispensaries, nurses' aid and other medical services to its members. It has a country-wide network of 218 dispensaries and a number of well equipped hospitals. During the present emergency it has offered its valuable facilities to the Armed Forces of the United Nations.

Still another section considers Old Medical Manuscripts. Certain chapters on drugs and therapy included in "The Arabic Pharmacopœia of Abu Al-Mina Al-Kuhin Al-Attar," are of interest to the pharmacologist and the medical man.

M. O. HOLLAND

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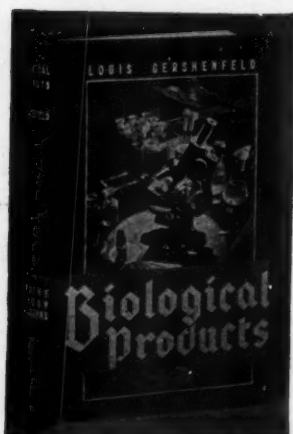
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*The Treasury Department acknowledges with appreciation the publication of this message by*

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